

SEQUENCE LISTING

<110> Hoechst Marion Roussel

<120> Novel monomer protein with bone morphogenetic activity
and medicinal agent containing the same for preventing
and treating diseases of cartilage and bone.

<130> JH98K008 PCT SEQUENCES IN ENGLISH

<140>

<141>

<150> 10-141379

<151> 1998-05-22

<160> 4

<170> PatentIn Ver. 2.1

<210> 1

<211> 357

<212> DNA

<213> HUMAN

<220>

<221> CDS

<222> (1)..(357)

<223> Relevant amino acid residues in SEQ ID NO 1 from 1
to 82 and from 84 to 119 in WO 95/04819.

Note : aminoacid residue 83 is alanine
instead of cysteine.

<300>

<301> HOTTEN, Gertrud
NEIDHARDT, Helge
PAULISTA, Michael

<302> New growth/differentiation factor of the tgfbeta familie.

<310> WO 95/04819

<311> 1995-02-16

<400> 1

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Pro Leu Ala Thr Arg Gln Gly Lys Arg Pro Ser Lys Asn Leu Lys Ala
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cgc tgc agt cgg aag gca ctg cat gtc aac ttc aag gac atg ggc tgg 96
Arg Cys Ser Arg Lys Ala Leu His Val Asn Phe Lys Asp Met Gly Trp
20 25 30

gac gac tgg atc atc gca ccc ctt gag tac gag gct ttc cac tgc gag 144
Asp Asp Trp Ile Ile Ala Pro Leu Glu Tyr Glu Ala Phe His Cys Glu
35 40 45

ggg ctg tgc gag ttc cca ttg cgc tcc cac ctg gag ccc acg aat cat 192
Gly Leu Cys Glu Phe Pro Leu Arg Ser His Leu Glu Pro Thr Asn His
50 55 60

gca gtc atc cag acc ctg atg aac tcc atg gac ccc gag tcc aca cca 240
Ala Val Ile Gln Thr Leu Met Asn Ser Met Asp Pro Glu Ser Thr Pro
65 70 75 80

ccc acc gcc tgt gtg ccc acg cga ctg agt ccc atc agc atc ctc ttc 288
Pro Thr Ala Cys Val Pro Thr Arg Leu Ser Pro Ile Ser Ile Leu Phe
85 90 95

att gac tct gcc aac aac gtg gtg tat aag cag tat gag gac atg gtc 336
Ile Asp Ser Ala Asn Asn Val Val Tyr Lys Gln Tyr Glu Asp Met Val
100 105 110

gtg gag tcg tgt ggc tgt agg 357
Val Glu Ser Cys Gly Cys Arg
115

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<211> 119

<212> PRT

<213> HUMAN

<400> 2

Pro Leu Ala Thr Arg Gln Gly Lys Arg Pro Ser Lys Asn Leu Lys Ala

1

5

10

15

Arg Cys Ser Arg Lys Ala Leu His Val Asn Phe Lys Asp Met Gly Trp

20

25

30

Asp Asp Trp Ile Ile Ala Pro Leu Glu Tyr Glu Ala Phe His Cys Glu

35

40

45

Gly Leu Cys Glu Phe Pro Leu Arg Ser His Leu Glu Pro Thr Asn His

50

55

60

Ala Val Ile Gln Thr Leu Met Asn Ser Met Asp Pro Glu Ser Thr Pro

65

70

75

80

Pro Thr Ala Cys Val Pro Thr Arg Leu Ser Pro Ile Ser Ile Leu Phe

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Val Glu Ser Cys Gly Cys Arg

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<210> 3

<211> 39

<212> DNA

<213> HUMAN

<220>

<221> misc_feature

<222> (1)..(39)

<223> Sense PCR primer for mutation introducing.

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39

<210> 4

<211> 37

<212> DNA

<213> HUMAN

<220>

<221> misc_feature

<222> Complement((1)..(37))

<223> Reverse PCR primer for mutation introducing.

<400> 4

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37